

**Claims**

1. A method of approximating cell geometry corresponding to a cell coverage area in a cellular transmission system, comprising providing data ( $a$ ,  $b$ )  
5 corresponding to first and second circular parameters for the coverage area of the cell.
2. A method according to claim 3 including providing said data as a function of major and minor axial extents ( $a$ ,  $b$ ) of an ellipse.
- 10 3. A method according to claim 3 or 4 including providing said data as a function of characteristics of relatively large and small circles ( $L$ ,  $S$ ).
4. A method according to claim 3 or 4 including providing said data as a  
15 function of characteristics of relatively large and small circles ( $L$ ,  $S$ ) that are concentric.
5. A method according to claim 3 or 4 including providing data corresponding to the centers of the circles.
- 20 6. A method according to any preceding claim including converting information corresponding to a rectangular approximation of the cell into said data.
- 25 7. A method according to claim 6 wherein the rectangular cell information is supplied in terms of latitude and longitude.
8. A method according to claim 7 including converting said information into said data in a different reference frame.

9. A method according to claim 7 or 8 wherein the rectangular cell information is supplied by DVB-T SI (Service Information), and including converting said information into a Cartesian reference frame.

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10. User equipment (UE1) for use in a cellular transmission system, comprising a processor configuration (6) to provide data corresponding to first and second circular parameters for the dimensional extent of at least one cell of the system.

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11. User equipment according to claim 10 wherein the processor configuration is operable to provide said data as a function of major and minor axial extents ( $a$ ,  $b$ ) of an ellipse.

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12. User equipment according to claim 10 or 11 wherein the processor configuration is operable to provide said data as a function of characteristics of relatively large and small circles ( $L$ ,  $S$ ).

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13. User equipment according to claim 11 wherein the processor configuration is operable to provide data corresponding to the centers of the circles.

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14. User equipment according to any one of claims 10 to 13 wherein the processor configuration is operable to convert information corresponding to a rectangular approximation of the cell into said data.

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15. User equipment according to claim 14 wherein the rectangular cell information is supplied by DVB-T SI information, and the processor configuration is operable to convert said information into a Cartesian reference frame.

16. User equipment according to claim 15 comprising a mobile device operable to receive DVB transmissions.

17. User equipment according to claim 16 further operable as  
5 telecommunications apparatus.

18. User equipment according to any one of claims 10 to 17 including circuitry to provide data corresponding to its current location, and a processor to compare the current location data with the data corresponding to the cell for  
10 determining whether a cell handover is to be carried out.

19. User equipment according to any one of claims 10 to 18 wherein the processor is operable to select one of a plurality of different approximate geometrical configurations for the cell in dependence on the relationship  
15 between the values of said parameters.

20. A cellular transmission network including user equipment (UE1), base stations (T0, T1) for transmitting signals in a cellular configuration to the user equipment (UE1), and a processor configuration (6) to provide data  
20 corresponding to first and second circular parameters for the dimensional extent of at least one the transmission cells provided by the base stations.

21. A method of approximating cell geometry in a cellular transmission system, comprising providing data corresponding to first and second parameters  
25 ( $a$ ,  $b$ ) for dimensional extents of the cell, and selecting one of a plurality of different approximate geometrical configurations for the cell in dependence on a relationship that is a function of the values of said parameters.

22. A method according to claim 21 including selecting an approximation of  
30 an elliptical cell configuration based on said parameters.

23. A method according to claim 22 including approximating the elliptical cell configuration as relatively large and small circles (L, S).
24. A method according to claim 22 or 23 including selecting between said  
5 elliptical cell configuration and a rectangular cell configuration based on the parameters.
25. User equipment for use in a cellular transmission system, comprising a processor configuration (6) to provide data corresponding to first and second  
10 parameters ( $a$ ,  $b$ ) for dimensional extents of the cell, and to select one of a plurality of different approximate geometrical configurations for the cell in dependence on the relationship between the values of said parameters.
26. User equipment according to claim 25 wherein the processor  
15 configuration is operable to select an approximation of an elliptical cell configuration based on said parameters.
27. User equipment according to claim 25 wherein the processor configuration is operable to approximate the elliptical cell configuration as  
20 relatively large and small circles (L, S).
28. User equipment according to claim 25, 26 or 27 wherein the processor configuration is operable to select between said elliptical cell configuration and a rectangular cell configuration based on the parameters ( $a$ ,  $b$ ).  
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29. User equipment according to any one of claims 25 to 28 including circuitry to provide data corresponding to its current location, and a processor to compare the current location data with the data corresponding to the selected cell configuration for determining whether a cell handover is to be carried out.